

Listing of Claims

X2 1. (Previously Presented) An article comprising an array of microcubes, at least one of said microcubes being non-hexagonal, such that for every plane in space there are two adjacent microcubes for which at the place of the adjacency none of the face edges is parallel to that plane, said at least one microcube having a projected area of less than 1 mm², said at least one microcube being canted edge-more-parallel.

X3 2. (Original) The article of claim 1 wherein said array is retroreflective.

3. (Original) The article of claim 2 wherein said article comprises retroreflective sheeting.

X3 4. (Original) The article of claim 3 wherein at least one microcube of said array has a projected area of about 1mm² or less.

5. (Original) The article of claim 4 wherein at least one microcube of said array has a projected area of about 0.35mm² or less.

6. (Original) The article of claim 5 wherein at least one microcube of said array has a projected area of about 0.04 - 0.12mm².

7. (Original) The article of claim 3 wherein said sheeting comprises a polymer resin.

8. (Original) The article of claim 7 wherein said polymer resin is selected from the group consisting of acrylic, polycarbonate, vinyl, polyester, and polyethylene.

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9. (Original) The article of claim 7 wherein said microcubes are formed by embossing.

10. (Original) The article of claim 7 wherein said microcubes are formed by casting.

11. (Original) The article of claim 1 in which at least one microcube of said array is canted.

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X

12. (Previously Presented) An article comprising an array of microcubes, at least one of said microcubes being non-hexagonal such that for every plane in space there are two adjacent microcubes for which at the place of the adjacency none of the face edges is parallel to that plane, in which array at least one said microcubes is canted, said array being formed of a material having a refractive index n, and the cant of at least one microcube in said array does not exceed about $\tan^{-1}\sqrt{2} - \sin^{-1}(1/n)$.

13. (Canceled)

X

14. (Original) The article of claim 11 in which at least one microcube in said array is edge-more-parallel.

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15. (Original) The article of claim 11 in which not all the cube axes in said array are parallel to each other.

16. (Original) The article of claim 15 in which some adjacent cubes are alternately face-more-parallel and edge-more-parallel.

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17. (Original) The article of claim 14 wherein retroreflectance in the plane of symmetry of the microcubes of said array is substantially constant and is greater than about 50% for all entrance angles less than about 30°.

18. (Original) The article of claim 11 in which said array is a retroreflective part of a pavement marker.

19-25. (Canceled)

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26. (Currently Amended) An article comprising an array of rectangular microcubes, at least some of which have no dihedral face-edges collinear with any dihedral face-edges of any adjacent microcubes, at least one of said rectangular microcubes having a projected area of less than 1 mm², said at least one microcube being canted either edge-more-parallel or face-more-parallel.

27 & 28. (Canceled)

29. (Original) The article of claim 1 wherein said article is a master for use in the production of a tool for making a retroreflective article.

30. (Original) The article of claim 1 wherein said article is an electroform for use in the production of a tool for making a retroreflective article.

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31. (Original) The article of claim 1 wherein said microcubes of said array are of unequal sizes.

32. (Original) The article of claim 3 wherein said sheeting is transilluminated.

33-90. (Canceled)

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91. (Previously Presented) A pavement marker for establishing on a finished roadway surface a marking visible from an oncoming vehicle, said pavement marker comprising a base member adapted to be mounted on the finished roadway surface, and a retroreflective signal means, said retroreflective signal means comprising an array of microcubes of claim 26.

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92. (Original) The pavement marker of claim 91 wherein the retroreflective signal means front surface is sloped about 30°-40° with respect to the road surface and comprises an array of canted rectangular microcubes, the cube axis cant being in the range of about -5° to -13°.

93. (Original) The pavement marker of claim 92 having horizontal entrance angularity up to at least about 30°.

X10

94. (Previously Presented) An article comprising an array of microcubes in which every region of three by three microcubes is nonrulable and in which at least one microcube in a said region of three by three microcubes is rectangular, said at least one microcube having a projected area of less than 1 mm², said at least one microcube being canted edge-more-parallel.